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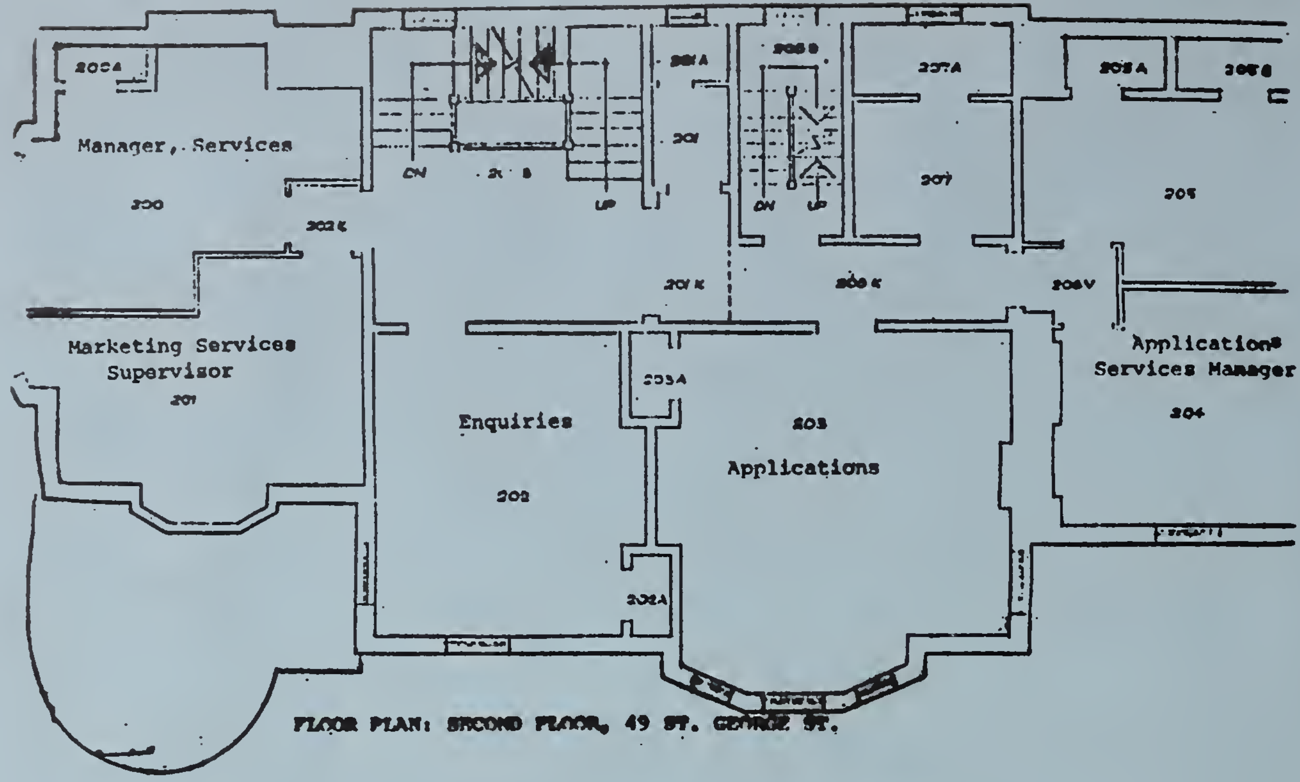
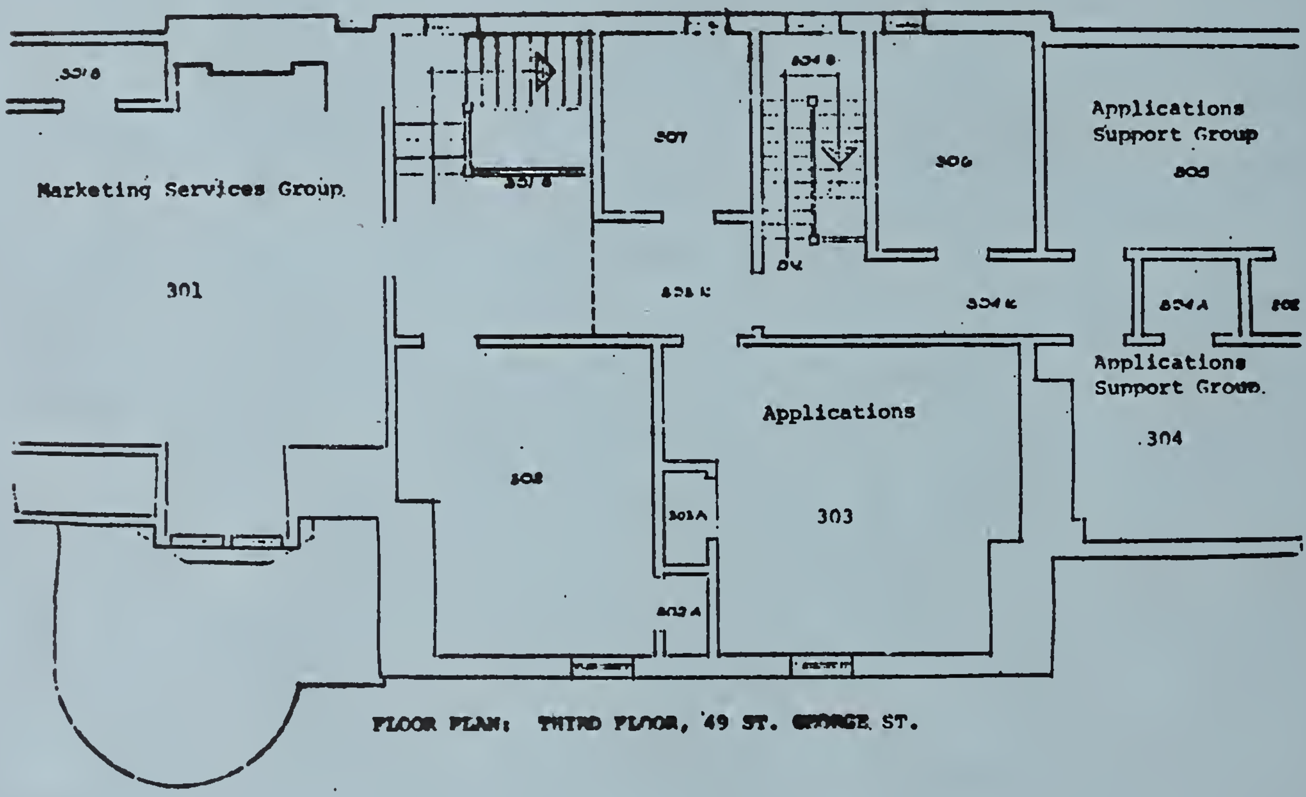


FLOOR PLAN: SECOND FLOOR, 49 ST. GEORGE ST.



FLOOR PLAN: THIRD FLOOR, 49 ST. GEORGE ST.

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HOURS OF SERVICE - VICTORIA DAY WEEKEND

The following hours of service will be in effect during the Victoria Day Weekend for:

S/370-165-II Users

	May 16 (Friday)	May 17 (Saturday)	May 19 (Sunday)	May 19 (Monday)
Sandford Fleming Terminal (SF112)	regular hrs.	10 a.m. - 6 p.m.	10 a.m. - 6 p.m.	closed
EUT	regular hrs.	10 a.m. - 6 p.m.	10 a.m. - 6 p.m.	closed
ASUT	regular hrs.	10 a.m. - 6 p.m.	10 a.m. - 6 p.m.	closed
AST	regular hrs.	10 a.m. - 6 p.m.	10 a.m. - 6 p.m.	closed

S/360-65 Users

regular hrs.	9 a.m. - 5 p.m.	9 a.m. - 5 p.m.	unattended

CRF Users

regular hrs.	closed	closed	closed

Margo Harvie

ERINDALE HOURS OF SERVICE

The following hours of service are currently in effect at the Erindale Terminal.

Monday - Friday	Saturday - Sunday
9 a.m. - 5 p.m.	closed

For the months of July and August, the hours of service will be as follows:

Monday - Friday	Saturday - Sunday
9 a.m. - 4.30 p.m.	closed

Muriel Elles

MORE INTERACTIVE TERMINAL DEMONSTRATIONS

Last month's COMPUTERNEWS included an article which listed a series of interactive terminal demonstrations that were to take place during April. The purpose of this series was to enable the user community to get an idea of the various makes and models of interactive terminals available. Most of the announced demonstrations took place and were very well attended.

The demonstrations have been held on an 'open house' basis, i.e. users may arrive at any time during the presentation. Most suppliers gave a short demonstration and then answered questions, after which the presentation was given again for a new group of visitors.

The following demonstrations are currently scheduled for the month of May.

IBM 3767

Date: Thursday, May 8,
1 p.m. - 4 p.m.
Location: Conference Room (302),
49 St. George

The 3767 is an extended replacement for IBM 2741. It is a desk-top printer-keyboard for interactive applications. It features a matrix printer rather than a typeball mechanism. Full APL support is included as well as built-in testing features and desk-calculator mode. This terminal is a part of Systems Network Architecture (SNA), IBM's recently announced long-range teleprocessing system structure.

TERMINAL DEMONSTRATIONS Cont'd.

Ahearn and Soper ASL/1

Date: Wednesday, May 14,
1 p.m. - 4 p.m.
Location: Conference Room (302)
49 St. George

The ASL/1 is a buffered communication terminal built around the DIABLO printer and featuring interchangeable typefaces and incremental pen/paper motion in four directions.

Users who have suggestions for future demonstrations or who want more detailed information on the demonstrations scheduled for May, should contact Ian Darwin at 928-7318.

Ian Darwin

SHARE XLIV -- LOS ANGELES

Several staff members from UTCC attended SHARE XLIV which took place in Los Angeles in early March. The recorded attendance of nineteen hundred seems to indicate that the current state of the economy encourages the sharing of resources.

The VS2 system was the subject of considerable interest at this SHARE Conference. In the VS2 general session, the results of a recent survey made by the SHARE VS2 group indicated that 80% of the users of large S/370 systems (168's and 158's) expected to be running VS2 by 1976. There was some concern expressed by those installations with smaller S/370 systems (145's and 155-II's) about whether VS2 could run within the maximum sizes (one and two megabytes) supported on these machines.

Several sessions describing VS2 user experiences took place. In general, users found that after an initial stabilizing period of several weeks the reliability was good. Programs that ran under MVT, in most cases ran without change under VS2. Performance results were rather inconclusive although it appears that VS2 does require some additional CPU overhead and, in some cases, additional memory. Most installations did not have software or hardware measurement tools, and were running below system capacity. UTCC staff members participated in several sessions describing our experiences with VS2 at the University of Toronto. One of the sessions was entitled 'Real System or Virtual Problems or Virtual System's Real Problems'. Our comparison of VS2 to MVT performance was one of the most thorough presentations given and has received wide attention. In summary, we found that VS2 required much more memory than originally expected and that the machine instruction rate decreased as the system became heavily loaded. As a result, system throughput and turnaround were degraded significantly.

cont'd...

SHARE XLIV Cont'd.

IBM is aware of the general dissatisfaction with the performance of VS2 and is attempting to solve these problems. Some performance improvement changes have been included in VS2 Release 3 which became available in mid-April. This system has been generated but has not yet been benchmarked to determine the magnitude of improvement.

Release 3 of VS2, aside from the performance improvement changes, has several new features. TSO enhancements include a significant extension to the command procedure (CLIST) capabilities. Command procedures now include iterative (DO) and conditional (IF) control statements. The Virtual Telecommunications Access Method (VTAM) which is part of the implementation of the new Systems Network Architecture (SNA) for communications systems is supported. JES2 shared spool support, which permits sharing of a common job queue between one to seven machines, is implemented in Release 3. Release 3 will support the virtual disk 3850 Mass Storage System and JES3, the ASP job entry subsystem for VS2, when they become available in August and September this year.

VS2 was only one of the many areas of interest covered at the SHARE Conference. UTCC also participated in discussions on user services, operations, basic systems, computer measurement and evolution. SHARE XLIV provided a successful forum for the exchange of information and ideas.

Rein Mikkor

UTCC HELPS SAVE A TREE
(New Print Trains and Paper)

On August 1, 1975, the Sandford Fleming Terminal will introduce a smaller format of printer paper and a smaller type face as the default standard form. The new standard form is 8 1/2" deep by 15" wide (21.6 cm x 38.1 cm) with an 8 line per inch carriage control tape and a smaller PN print train. All jobs routed to this terminal will be printed on this form by default.

Budgetary considerations have prompted UTCC to introduce the new format of paper. It is expected that UTCC will save approximately 10% of its paper costs while consuming 20% less paper. This may not appear to be much of a saving until one recalls that last year UTCC used roughly 25,000,000 sheets of computer output paper, of which probably 90% was thrown away within one day.

The new format has several advantages for the user:

1. It is more compact and easier to handle.
2. Copies of printouts can be produced on photocopying machines without photoreduction, since the printed area is smaller than legal size paper (8 1/2 x 14).
3. Up to 68 lines can be produced on a page compared to 66 lines for the current standard sized form.

cont'd...

NEW PRINT TRAINS AND PAPER Cont'd.

Most users will not be affected by this change. No compilers will be modified - the same number of lines will be printed per page. However, users who are doing printer plots should modify their programs to plot on a grid of 8 units high and 10 units wide (each 1 inch grid contains 80 characters in eight rows with 10 print positions per row). New programs should also have variables indicating the number of vertical and horizontal print positions per inch (or per page) to ensure that the program can be run at many installations.

The two high speed job stream terminals, ASUT and EUT, will also have the smaller sized paper. The standard size of PN train will no longer be available at the Sandford Fleming Terminal and a forms mount charge will be required for all output produced on 11" x 15" lined paper.

A USERBOOK update will be issued detailing all of the changes in the forms setup.

Mark Tapia

PERSONNEL CHANGES

Leaving the Centre are Ford Clancy, Lenore Leekam, Tom Sellgren, David Dobinson and Debra Mulgrew. Good luck and best wishes in your new endeavours.

New staff members are Marua Clement, Cherry Dacres and Ellen Chung, joining Support Services as keypunch operators. Welcome aboard!

Trudy Holland

RECENT ACQUISITIONS IN THE DEPARTMENT OF COMPUTER SCIENCE LIBRARY

Brown, Peter J.
Macro Processors and Techniques for Portable Software.
London, Wiley, 1974.

Datafair 73 conference papers.
London, British Computer Society, 1974.
Volume 1: Business papers.
Volume 2: Scientific and Research Papers.

Even, Shimon.
Algorithmic Combinatorics.
New York, Macmillan, 1973.

Halstead, Maurice H.
A Laboratory Manual for Compiler and Operating System Implementation.
New York, American Elsevier, 1974.

Kimble, Gerald W.
Information and Computer Science.
New York, Holt, Rinehart and Winston, 1975.

Kleinrock, Leonard.
Queuing Systems, Volume I: Theory.
New York, Wiley, 1975.

cont'd...

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Kochenburger, Ralph J. and Turcio, C.J.
Introduction to PL/1 and PL/C Programming.
Santa Barbara, Hamilton Pub. Co., 1974.

IEEE Proceedings.
Special Issue on Minicomputers. (Volume 61, No. 11)
New York, IEEE, Nov. 1973

IFIP TC-2 Working Conference on Programming Teaching Techniques, Zakopane, Poland, 1972.
Programming Teaching Techniques, edited by W. M. Turski.
Amsterdam, North-Holland, 1973.

Manna, Zohar,
Mathematical Theory of Computation.
New York, McGraw-Hill, 1974.

Mosmann, Charles, ed.
Statewide Computing Systems: Coordinating Academic Computer Planning.
New York, Marcel Dekker, 1974.

Sagamore Computer Conference on Parallel Processing, Syracuse, N.Y., 1973.
Proceedings.
New York, IEEE, 1973.

Sicking, L.M.C.J. and Walden, B.V. de G.
Automatic Literature Processing.
Amsterdam, I.A.G., 1970.

U.S.-Japan Seminar on Learning Control and Intelligent Control, 2d
Gainsville, Fla., 1973.
Learning Systems and Intelligent Robots, ed. by K. S. Ful and J. T. Tou. New York, Plenum Press, 1974.

CHANGES IN HOURS OF SERVICE

On Monday, April 28, 1975 at 0:00 hours, System/370 Services test time was extended one hour to accommodate system testing.

The GPJS hours of service are now as follows:

Monday to Friday	1 a.m. to 6 a.m.
	8 a.m. to 10 p.m.
Saturday & Sunday	10 a.m. to 6 p.m.

These hours will remain in effect until further notice.

Derry Cox

FORTRAN PACKED DECIMAL SUBROUTINE

The reading of packed decimal data on a magnetic tape by a FORTRAN load module may have created difficulties for some users. Such tapes are commonly produced by COBOL, PL/I and Assembler programs and their data structures can be quite complicated.

UTCC has obtained a general purpose file conversion routine for packed decimal data. This program, written by Mr. Charles Cohen of the Institute for Policy Analysis, is a file driven conversion routine which obtains a description of the packed decimal datafields from a file definition format statement.

Documentation on this program will be included in USERBOOK. Until then, users who have questions concerning the package should contact Herb Kugel at 928-7286.

Herb Kugel

NEW NTSYS PACKAGE AVAILABLE

Users involved in numerical taxonomy may be interested in the new version of the NTSYS package now available at UTCC. This package, used in the area of multivariable statistical analysis with an emphasis on taxonomy, was written by F. James Rohlf and John Kispaugh of the State University of New York and David Kirk of the Quantra Development Corp.

To obtain documentation on the package, the user should run the following class=B job:

```
/*SETUP UNIT=2400,VOL=(EXT=N5552,INT=MAILER)
//   EXEC  NTDOC
```

Allow 1 minute and 4500 lines on the job statement.

To run a sample program:

```
// EXEC NTSYS74
//FT05F001 DD DSN=USER.NTSYS.SAMPLE,DISP=SHR
```

Allow 2 minutes and 1400 lines on the job statement.

Any questions concerning the above should be directed to Herb Kugel at 928-7286.

Herb Kugel

PL/I UPGRADE

PL/I OPTIMIZING compiler, RESIDENT library and TRANSIENT library were upgraded from Release 2.1 level to 2.2 on April 16, 1975.

cont'd...

PL/I UPGRADE Cont'd.

IMPROVEMENTS:

11 and 12 problems have been fixed in Release 2.2 level of the RESIDENT and TRANSIENT libraries, respectively. The new release OPTIMIZING compiler has incorporated in it fixes to 213 problems known in previous releases, as well as minor improvements. Some of these improvements are described below.

1. The time taken to produce ATTRIBUTES and XREF listings has been decreased.
2. The compile-time option, SIZE, may be specified in a negative form; SIZE(-nk) and SIZE(-m) will give SIZE(MAX)-nk and SIZE(MAX)-m bytes, respectively.
3. INPUT/OUTPUT of an element of an array of structures with more than one base variable FROM/TO a file declared with the TOTAL option will now be performed faster by inline coding instead of by subroutine call.

Interactive PL/I OPTIMIZER through TSO

The conversational mode default compiler options have been changed so that:

1. Output to SYSPRINT from programs executing under subcommand RUN of EDIT will be printed at the terminal instead of being lost.
2. Compiler listing at the terminal will be limited to diagnostic and informatory messages unless explicitly requested otherwise. In particular, the previously default-generated lengthy OFFSET and STORAGE tables are suppressed for faster response and less printing time.

Kin Fong

FORTRAN H-EXTENDED UPGRADE

FORTRAN H-EXTENDED compiler was upgraded from Release 2.0 to 2.1 on April 16, 1975. This release of the compiler includes fixes for seventy-eight known errors in previous releases.

Kin Fong

HSJS MONTHLY STATISTICS

During the month of March, 1975, 229,678 jobs were processed compared with 189,767 jobs for the previous year, an increase of 21%.

The following charts summarize the HSJS activity for the month of March. The graph represents the average number of jobs processed during each half hour period of the day.

Mark Tapia

```
ALL TERMINALS                                          JOB VOLUME FOR 01/03/75 - 31/03/75
CLASS = W                                                    (AVERAGE OVER 30 DAYS)

                                                  # JOBS WHICH BEGAN EXECUTION AT INDICATED TIME
                                      25   50   75  100  125  150  175  200  225  250  275  300  325  350  375  400  425  450  475  500
                           |#JOBS|TOO|----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+----+
                           |   61|   |666666666666
PROCESSOR   #USES    %     |   86|   |66666666666666666
WATFIV      98094  (42)    |   68|  1|6666666666666
PL/C        55861  (24)    |   67|   |6666666666666
OTHER*      35313  (15)    |   55|  2|66666666666
ALGOLW      10274  ( 4)    |   56|   |66666666666
ASMG         8067  ( 3)    |   49|  3|666666666
UTILITY      7350  ( 3)    |   41|   |66666666
WATBOL       5706  ( 2)    |   35|  4|6666666
SPITBOL      4049  ( 1)    |   31|   |666666
LISP         2631  ( 1)    |   27|  5|66666
PLUTO        1431  ( 0)    |   22|   |6666
SIMON         849  ( 0)    |   12|  6|66
OTHER           0  ( 0)    |    7|   |6
                           |    0|  7|
                           |    6|   |6
                           |   55|  8|66666666666
                           |  115|   |66666666666666666666666
                           |  121|  9|666666666666666666666666
                           |  163|   |66666666666666666666666666666666
                           |  209| 10|66666666666666666666666666666666666666666
                           |  220|   |66666666666666666666666666666666666666666666
                           |  267| 11|66666666666666666666666666666666666666666666666666666
                           |  299|   |66666666666666666666666666666666666666666666666666666666666
                           |  301| 12|666666666666666666666666666666666666666666666666666666666666
                           |  326|   |66666666666666666666666666666666666666666666666666666666666666666
                           |  341| 13|66666666666666666666666666666666666666666666666666666666666666666666
                           |  321|   |6666666666666666666666666666666666666666666666666666666666666666
                           |  312| 14|66666666666666666666666666666666666666666666666666666666666666
                           |  337|   |6666666666666666666666666666666666666666666666666666666666666666666
                           |  336| 15|6666666666666666666666666666666666666666666666666666666666666666666
                           |  346|   |666666666666666666666666666666666666666666666666666666666666666666666
                           |  339| 16|6666666666666666666666666666666666666666666666666666666666666666666
                           |  328|   |66666666666666666666666666666666666666666666666666666666666666666
                           |  312| 17|66666666666666666666666666666666666666666666666666666666666666
                           |  301|   |666666666666666666666666666666666666666666666666666666666666
                           |  217| 18|6666666666666666666666666666666666666666666
                           |  196|   |666666666666666666666666666666666666666
                           |  195| 19|666666666666666666666666666666666666666
                           |  209|   |66666666666666666666666666666666666666666
                           |  209| 20|66666666666666666666666666666666666666666
                           |  208|   |66666666666666666666666666666666666666666
                           |  213| 21|666666666666666666666666666666666666666666
                           |  201|   |6666666666666666666666666666666666666666
SHIFT    #JOBS             |    6| 22|6
0 - 8    18888             |    0|   |
8 - 4   122274             |    1| 23|
4 - 12   88516             |    8|   |6
                            7655|   | 8-SERVICE FACTOR(2.0) || 6-SERVICE FACTOR(1.0) || 4-SERVICE FACTOR(.75)

TOTAL JOBS AT SF .75  (UNAVERAGED)      0
TOTAL JOBS AT SF 1.0  (UNAVERAGED) 229677      *SP/K, SPSSQ and SNAP
TOTAL JOBS AT SF 2.0  (UNAVERAGED)      1
TOTAL JOBS AT ALL SF  (UNAVERAGED) 229678
```

RESOURCE USAGE BY PROCESSOR

PROCESSOR	#USES	%TOTAL	TOTAL PER PROCESSOR CPU (MIN)	#CARDS READ	#LINES PRINTED	AVERAGE PER USE CPU (MIN)	#CARDS READ	#LINES PRINTED
WATFIV	98094	(43)	1005.22	10855840	14694406	0.008	108	148
PL/C	55861	(24)	1140.29	10563266	16285350	0.020	188	288
OTHER*	35313	(15)	448.31	1634639	4024192	0.012	44	112
ALGOLW	10274	(4)	131.83	2862097	3773390	0.012	276	364
ASMG	8067	(4)	115.15	1249313	2461041	0.012	152	304
UTILITY	7350	(3)	19.18	760447	961368	0.000	100	128
WATBOL	5706	(2)	111.60	1979803	2226204	0.020	344	388
SPITBOL	4049	(2)	41.85	390319	644441	0.008	96	156
LISP	2631	(1)	28.70	217822	606419	0.008	80	228
PLUTO	1431	(1)	30.46	81755	142097	0.020	56	96
SIMON	849	(0)	3.66	63648	73245	0.004	72	84
ASSIST	53	(0)	0.93	26489	28072	0.016	496	528
TOTAL	229678		3077.20	30685438	45920225	0.013	133	199

*SP/K, SPSSQ and SNAP

S/370-165-II RELIABILITY

The reliability statistics for March indicate an uptime percentage of 96.7 while the average number of IPLs per day reached 1.10. The scheduled hours of production for March totalled 460.

MONTHLY COMPARATIVE FIGURES

MONTH	% UPTIME	UNSCHED. IPLs/DAY
JAN/74	97.0	1.37
FEB/74	98.3	1.25
MAR/74	98.7	1.06
APR/74	99.3	0.52
MAY/74	99.2	0.87
JUN/74	96.1	0.75
JUL/74	91.7	1.66
AUG/74	98.3	0.86
SEP/74	94.5	1.83
OCT/74	98.6	1.07
NOV/74	98.9	0.93
DEC/74	97.1	1.21
JAN/75	95.7	2.77
FEB/75	96.0	1.14
MAR/75	96.7	1.10

The percentage breakdown of total system downtime for March was:

Hardware: 792 minutes (83.9%)
Software: 109 minutes (11.5%)
Other : 43 minutes (4.6%)

The major events contributing to these downtime totals were as follows:

March 10, 11, 12, 15:

A total of 596 minutes and 9 IPLs were attributed to double bit errors in ITEL memory plus a storage protect problem. Both problems were rectified by the replacement of bad cards. In addition to the downtime, the S/370 system was run with only two megabytes of memory online for a period of twenty hours.

March 12, 27:

A total of 85 minutes and 3 IPLs were attributed to two separate problems with the 7830 controllers attached to the ITEL disk channels. The first was suspected to be caused by excessive heat in the machine room for which the room temperature was dropped by 3 degrees. The second was attributed to a bad engineering change which was immediately removed by ITEL.

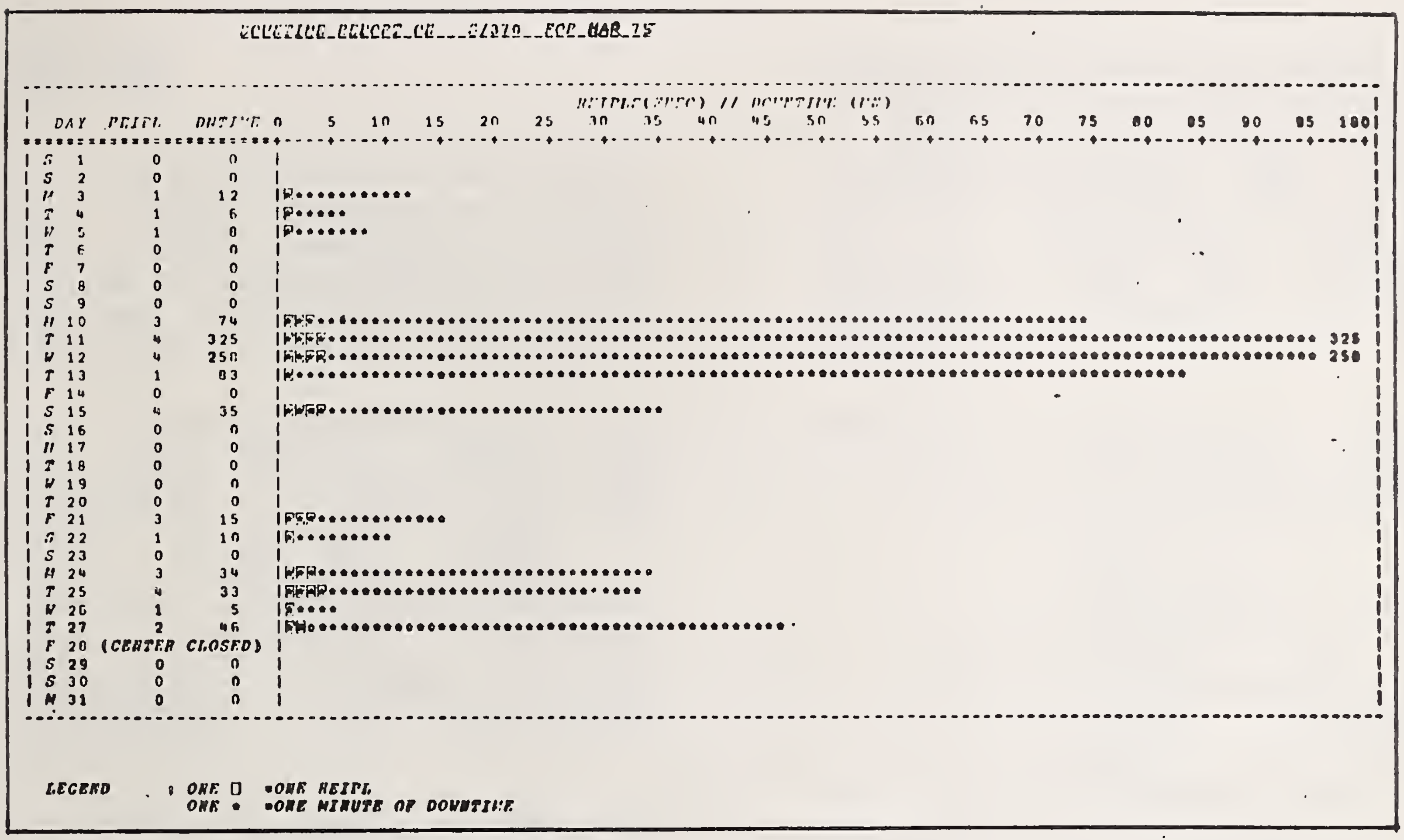
March 13:

A total of 83 minutes and 1 IPL were attributed to a faulty power supply regulator in the CPU. The regulator was replaced by IBM.

March 25:

A total of 33 minutes and 4 IPLs were attributed to disastrous errors on the HASP spool volume. It was necessary to terminate all system input until a cold format was completed.

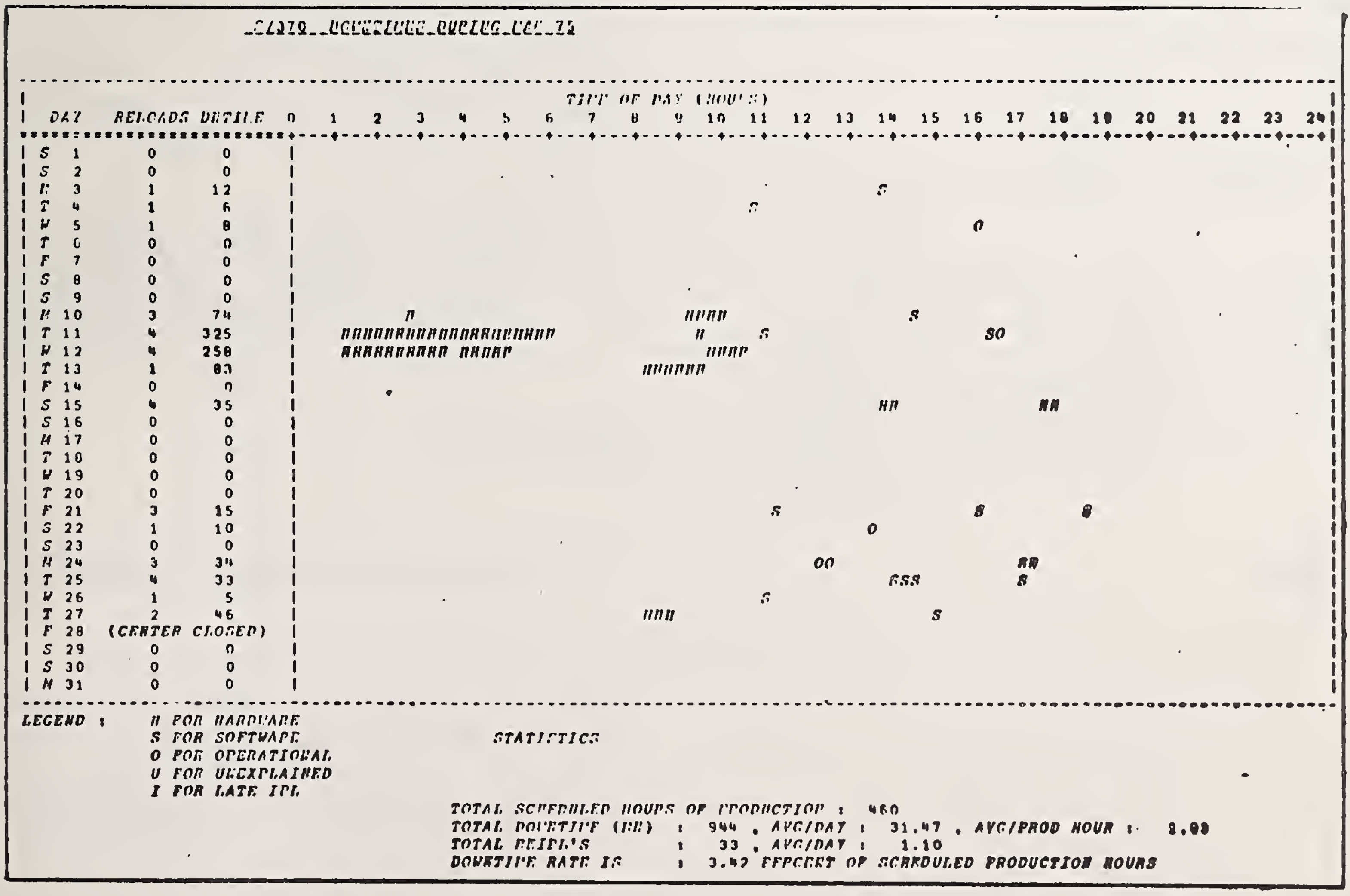
Paul Scarborough



```
                    DOWNTIME REPORT ON  S/370  FOR MAR 75

                                              REIPLS(SPEC) // DOWNTIME (MN)
 DAY  REIPL   DNTIME 0    5   10   15   20   25   30   35   40   45   50   55   60   65   70   75   80   85   90   95  100
| S  1      0       0  |
| S  2      0       0  |
| M  3      1      12  |
| T  4      1       6  |
| W  5      1       8  |
| T  6      0       0  |
| F  7      0       0  |
| S  8      0       0  |
| S  9      0       0  |
| M 10      3      74  |
| T 11      4     325  |                                                                                               325
| W 12      4     250  |                                                                                               250
| T 13      1      83  |
| F 14      0       0  |
| S 15      4      35  |
| S 16      0       0  |
| M 17      0       0  |
| T 18      0       0  |
| W 19      0       0  |
| T 20      0       0  |
| F 21      3      15  |
| S 22      1      10  |
| S 23      0       0  |
| M 24      3      34  |
| T 25      4      33  |
| W 26      1       5  |
| T 27      2      46  |
| F 28  (CENTER CLOSED) |
| S 29      0       0  |
| S 30      0       0  |
| M 31      0       0  |

 LEGEND    : ONE □  =ONE REIPL
             ONE *  =ONE MINUTE OF DOWNTIME
```



```
                    S/370  DOWNTIME DURING MAR 75

                                                      TIME OF DAY (HOURS)
 DAY   RELOADS DNTIME  0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20  21  22  23  24
| S  1      0      0   |
| S  2      0      0   |
| M  3      1     12   |                                                       S
| T  4      1      6   |                                           S
| W  5      1      8   |                                                                O
| T  6      0      0   |
| F  7      0      0   |
| S  8      0      0   |
| S  9      0      0   |
| M 10      3     74   |           H                         HHHH                     S
| T 11      4    325   |     HHHHHHHHHHHHHHHHHHHH             H     S                    SO
| W 12      4    258   |     HHHHHHHHHH HHHHH                  HHHH
| T 13      1     83   |                                 HHHHHH
| F 14      0      0   |
| S 15      4     35   |                                                       HH             HH
| S 16      0      0   |
| M 17      0      0   |
| T 18      0      0   |
| W 19      0      0   |
| T 20      0      0   |
| F 21      3     15   |                                             S                  S         S
| S 22      1     10   |                                                      O
| S 23      0      0   |
| M 24      3     34   |                                                 OO                 HH
| T 25      4     33   |                                                        SSS         S
| W 26      1      5   |                                            S
| T 27      2     46   |                                 HHH                        S
| F 28  (CENTER CLOSED)|
| S 29      0      0   |
| S 30      0      0   |
| M 31      0      0   |

LEGEND :     H FOR HARDWARE
             S FOR SOFTWARE                     STATISTICS
             O FOR OPERATIONAL
             U FOR UNEXPLAINED
             I FOR LATE IPL
                                   TOTAL SCHEDULED HOURS OF PRODUCTION :  460
                                   TOTAL DOWNTIME (MN)  :  944 , AVG/DAY :  31.47 , AVG/PROD HOUR :  2.05
                                   TOTAL REIPL'S        :   33 , AVG/DAY :   1.10
                                   DOWNTIME RATE IS     :  3.42 PERCENT OF SCHEDULED PRODUCTION HOURS
```

CPS GONE

The CPS service on the S/360-65 has now been discontinued. CPS was the first Interactive Terminal System at UTCC (at that time known as ICS, the Institute for Computer Science).

CPS was supplemented by APL and ATS, and its RJE feature was supplanted by ATS/RJE and CRJE (which was, in turn, replaced by TSO). Interactive PL/I is available on TSO with the Checkout and Optimizer compilers. Programmable 'super desk calculators' at UTCC include APL and SPEAKEASY.

With the demise of CPS, the Computer Centre no longer offers a BASIC interpreter. Although there has not been a great enough demand to justify the support of BASIC, UTCC has investigated several versions and could make it available if the demand became significant.

Users who want CPS files converted or who have problems or suggestions, should contact Ian Darwin at 928-7318 or Stan Yagi at 928-7331.

Ian Darwin

INTERACTIVE SYSTEMS RELIABILITY

The uptimes achieved for the month of March for each of APL, ATS, and CPS were 99.69%, 98.42% and 99.68% of scheduled operation, respectively. The scheduled hours of operation for the month of March totalled 470, while the number of unscheduled IPL's per day was 0.10. In addition to the scheduled time interactive services were also available for approximately 136 hours of unattended weekend operation. The major events contributing to downtime were as follows:

March 13:	An attempt to modify the APL file utility to allow incremental dump of the file subsystem was unsuccessful during restore, and the restore using the old version overlapped into normal production hours.
March 24:	A combination of operational oversight (3705 emulator program was loaded while the system was active) and power fluctuation during rollin resulted in 390 minutes of downtime for ATS.

The following table summarizes the time lost out of scheduled hours of production due to system failures for each of the systems. Three unscheduled IPL's were required as a result of the failures.

Kam Jain

DATE	DOWNTIME (mins)			REASON
	APL	ATS	CPS	
Thu. Mar. 20	10	12	14	Late IPL due to sheared oil pump drive gear-SYSDA (HARDWARE)
Mon. Mar. 24	30	390	31	*Operational oversight and power fluctuation
Thu. Mar. 27	27	29	30	*Control terminals locked (UNDETERMINED)
"	11	13	14	*IGF013W Chan. error (HARDWARE)
Sat. Mar. 29	8	-	-	APL Abend - U1000 Equip. check on disk drive (HARDWARE)
Total	86	444	89	*IPL Required

System Failures March 1 to March 31, 1975

U of TORONTO data talk DIAL 928-6710

UNIVERSITY OF TORONTO DATATALK

DATATALK: Good morning, DATATALK services ...
C: Hello, DATATALK?
D: Yes. Good morning ...
C: What in the world is DATATALK?

DEFINITION: University of Toronto DATATALK is a computer service which is offered by UTCC at no charge for casual enquiry and problem solving over the telephone. It is available to anyone within the University of Toronto community.

The first of May marks the first anniversary of DATATALK services at the University of Toronto. During the past year, DATATALK has enjoyed a very good response among computer users and potential computer users at the University.

We have also received many enquiries from computer centres in Canada and the United States regarding DATATALK, but for the moment, at least, DATATALK remains a unique and exciting computing service that has no counterpart elsewhere.

Much of our history has appeared in back issues of COMPUTERNEWS but for those of you who have been following these articles and considering whether you would like to have a DATATALK services implemented at your computing centre, the following references may be helpful:

"University of Toronto DATATALK, Person-through-Person Computing", CIPS Computer Magazine, Volume 6, No. 2, February, 1975

"DATATALK Converts Non-believers" by Vic Farmer, COMPUTERWORLD, December 25 - January 1 issue.

and to appear with updated information,

"DATATALK, Person-Through-Person Computing", The Auerbach Annual 1975, Manson/Charter Publishers, Inc., New York.

Ernst Goetze

DIALOGUE: MORE DATATALK QUICK QUERIES

DATATALK offers fast, accurate answers to problems that can be answered quickly with assistance from the computer.

The dialogues below are samples of DATATALK conversational computing experiences. It is hoped that these examples will encourage users to find new and better ways to get their work done with the help of DATATALK.

DATATALK: Good morning, DATATALK services, Ernst Goetze speaking.
C: Hello! What is 10,128,765,465 X 11 X 13 X 17 X 61?
D: That is 1,502,004,759,570,315.
C: Is that correct...?
D: Yes. The first number you gave me is 10128 76546 5 and then 11 13 17 and 61. The only possible source of error is overflow, but that does not occur here...
C: Good. Thank you. Bye.

....

DATATALK: Good morning, DATATALK services...
C: How large should I take N so that (1/16)X LOG((N+1)/8N-1) is less than 0.0005?
D: N equal to 32 would be large enough.
C: If I take N equal to 30?
D: ...You're within tolerance 0.00052.
C: Fine. Thank you.

....

DATATALK: Good morning, DATATALK services...
C: Hi. I want to know what, for practical purposes, the sum of this series is. I think that roughly twenty terms will be enough...though I'm not really sure either...
D: Yes?
C: Yes...Let then...are you ready?
D: Yes.
C: Let K = 1 - 1/PI and for N = 2,3,4,..., let THETA (N) equal arccos one minus two times K to the N-1 times K to the N-2 divided by, in brackets, two minus K to the N-1 and times 2 minus K to the N-2.
C: What then is the sum of the THETAS?
D: ...HM...Is that, open bracket one minus two times...
C: No! Oh, No...It's one minus two times...

$$\left(\theta(n) = \arccos \left\{ \frac{1 - 2K^{n-1}K^{n-2}}{(2 - K^{n-1})(2 - K^{n-2})} \right\} \right)$$

cont'd...

DIALOGUES Cont'd.

D: Right. I think that I've got it then. It seems that twenty terms is only adequate to assure one decimal digit.
C: That isn't enough.
D: O.K. The series settles down after fifty terms and has the value 3.796692564352075 ...the fifteenth decimal digit may not be significant.
C: Oh! Fine...but...what can I do with say thirty terms?
D: 3.79666618. Suppose that I send you these results?
C: Yes. Please do.
C: I calculated THETA(2) and THETA(2) plus THETA(3). Shall we compare?
D: Yes. THETA(2) equals 1.60499 and THETA(2) plus THETA(3) equals 2.41847.
C: O.K. Fine then, I guess we agree.
D: I will write down the series that I programmed and send the partial sums for the first sixty or so terms...?
C: Good. Yes. Thank you very much. Bye now.

Ernst Goetze

UTCC COMPUTER EQUIPMENT

SYSTEM/370 MODEL 165-II

- located in SF103/105/112
- provides General Purpose Job Stream, High Speed Job Stream and TSO services
- 3072K bytes of memory
- 1 drum
- 13 disk drives (3330)
- 8 disk drives (2314)
- 6 magnetic tape drives (4 9-track and 2 7-track)
- 6 display consoles
- 6 printers
- 5 card readers
- 1 card punch
- 8 remote batch terminals
- 1 paper tape reader
- Calcomp plotters (11" and 30")
- Gould plotter (11")
- OS/MVT with HASP

SYSTEM/360 MODEL 65

- located in McLennan Physical Laboratories
- provides Interactive Systems Service
- 1536K bytes of core
- 24 disk drives (2314)
- 3 9-track magnetic tape drives
- 1 printer
- 1 card reader
- 1 card punch
- 140 typewriter terminals
- OS/MVT with APL, ATS

7094 II

- located in Room 1203 Burton Tower
- 32K words of core
- 1 disk
- 8 magnetic tape drives
- input/output via a 1401 computer

COMPUTER RESEARCH FACILITY

- located in SF207
- DEC GT44 Systems with
  - 1 PDP-11/40 CPU
  - 2 9-track dual density tape drives
  - 1 1000 cpm card reader
  - VT17 graphics display unit
  - 1 lab. peripheral system with A/D & D/A
  - 1 CVI 260 Video Bandwidth Compressor
- DEC GT40 System with
  - 1 PDP-11/10 CPU
  - 1 2314 tape disk drive
  - 1 VT12 graphic display unit
  - 9-track/800 BPI tape drive
  - 1 Calcomp microfilm plotter

UTCC DIRECTORY

	ROOM	PHONE 928-
DIRECTOR		
John C. Wilson	SF143	6496
ASSOCIATE DIRECTOR		
Al Heyworth	SF116	4936
ADMINISTRATION MANAGER		
Anthony Pieterse	SF137	8948
INFORMATION OFFICE		
General Inquiries	SF128	4990 or 4991
Don Gibson	SF128A	
MANAGER, SERVICES		
Stan Yagi	SG200	7331
SUPERVISOR, MARKETING SERVICES		
Dave Scobie	SG201	6877
TERMINAL CO-ORDINATORS		
Sandford Fleming Terminal		
Mark Tapia	SF125	7109
Program Advisors	SF117	8599
Erindale		
Vaughan Lawrason		828-5311
Scarborough		
Ralph Lombardi		284-3173
Arts and Science		
Marlene Domoney	SS2104	6509
Management Studies		
Paul Roth		4917
MANAGER, APPLICATIONS SUPPORT		
Joyce Walton	SG204	6875
MANAGER, OPERATIONS		
Derry Cox	SF113	7092
MANAGER, SYSTEMS		
Rein Mikkor	SF113	5058
SYSTEM HARDWARE SUPERVISOR		
Eugene Siciunas	SF113	4967
SUPERVISOR, 7094 SERVICES		
William Beasley	NP1207	7094
MANAGER, COMPUTER RESEARCH FACILITY		
Dennis Smith	SF214B	4800
LAB CO-ORDINATOR (CRF)		
Krishna Patnaik	SF207	8858

	ROOM	PHONE
CONTRACT PROGRAMMING		
Bill Greene	SF214C	2694
AUTHORIZATION CLERK		
Yvonne Bowen	SF139	8703
ASSISTANT MANAGER, INFORMATION SYSTEMS TERMINAL		
George Milo		5040

NOTE:

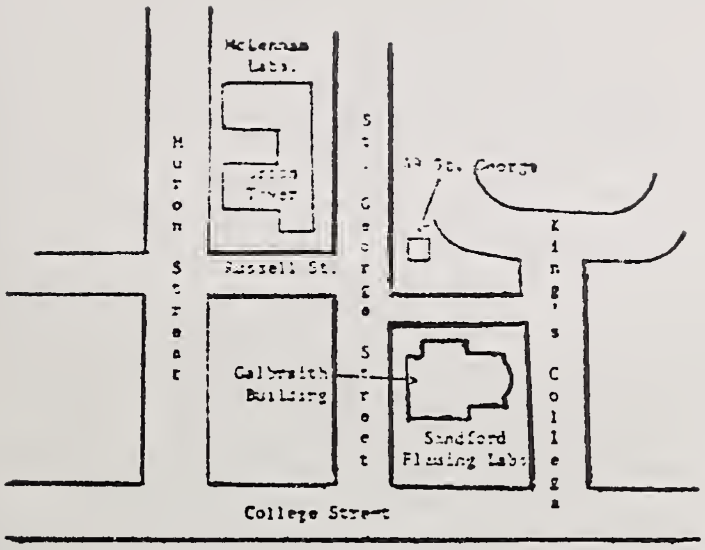
SF = Sandford Fleming
SG = 49 St. George
NP = McLennan Physical (New Physics)
SS = Sydney Smith

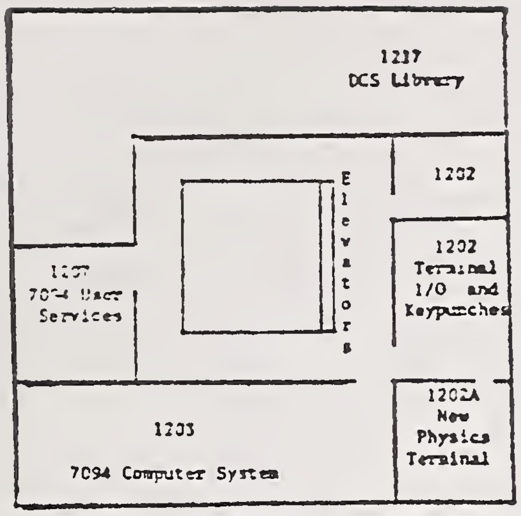
JOB AND SYSTEM STATUS QUERIES

SYSTEM/370, TSO	7373
ATS/APL	6234
7094	7094
2741 TERMINAL MALFUNCTIONS	7107
029 KEYPUNCH MALFUNCTIONS	6465

SERVICES

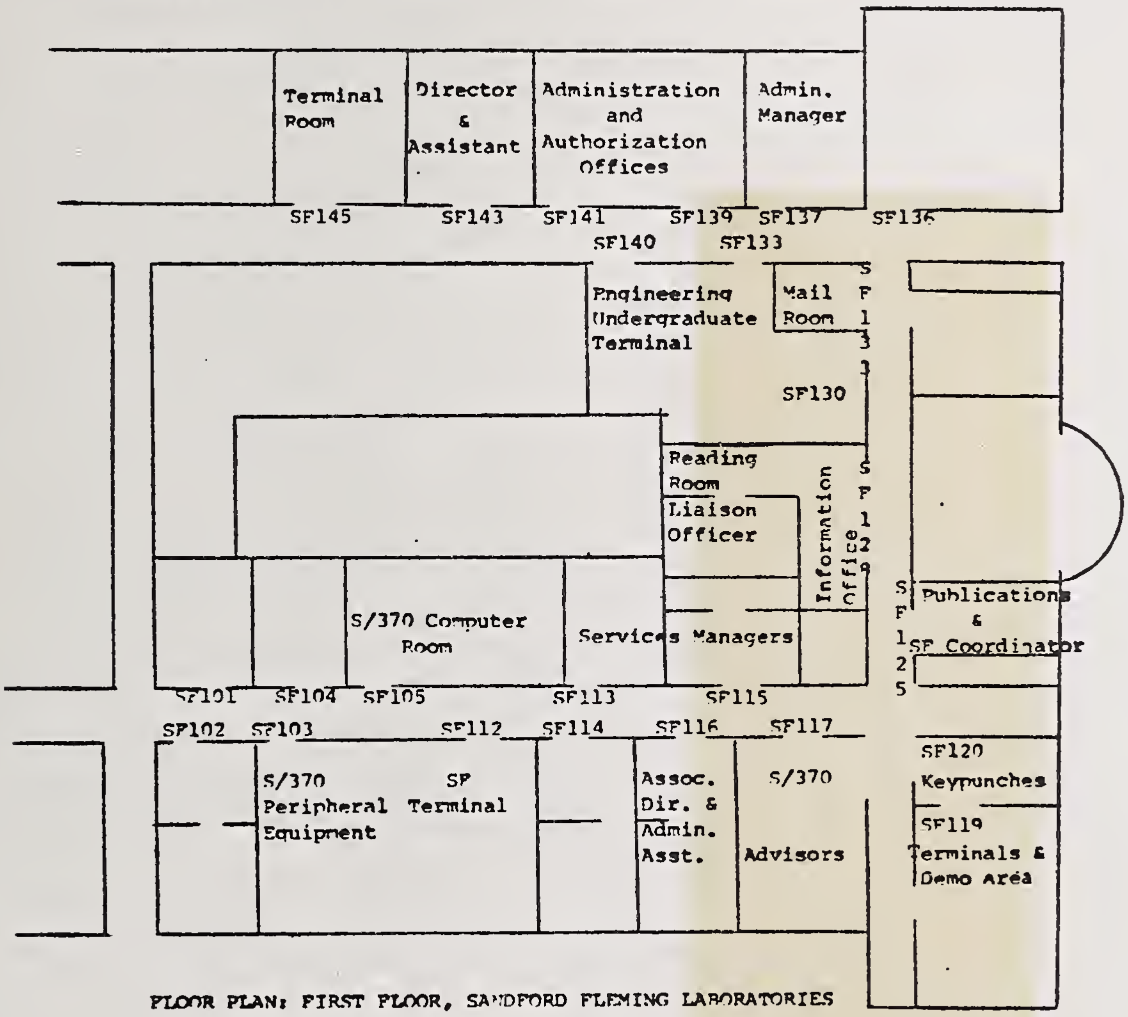
	DIAL-UP	ADVICE
APL	7200	6710
ATS	7100	7107
TSO - 2741	7303	8599
TSO - TTY (10 cps)	7390	8599
TSO - TTY (30 cps)	7386	8599
DATATALK	6710	6710



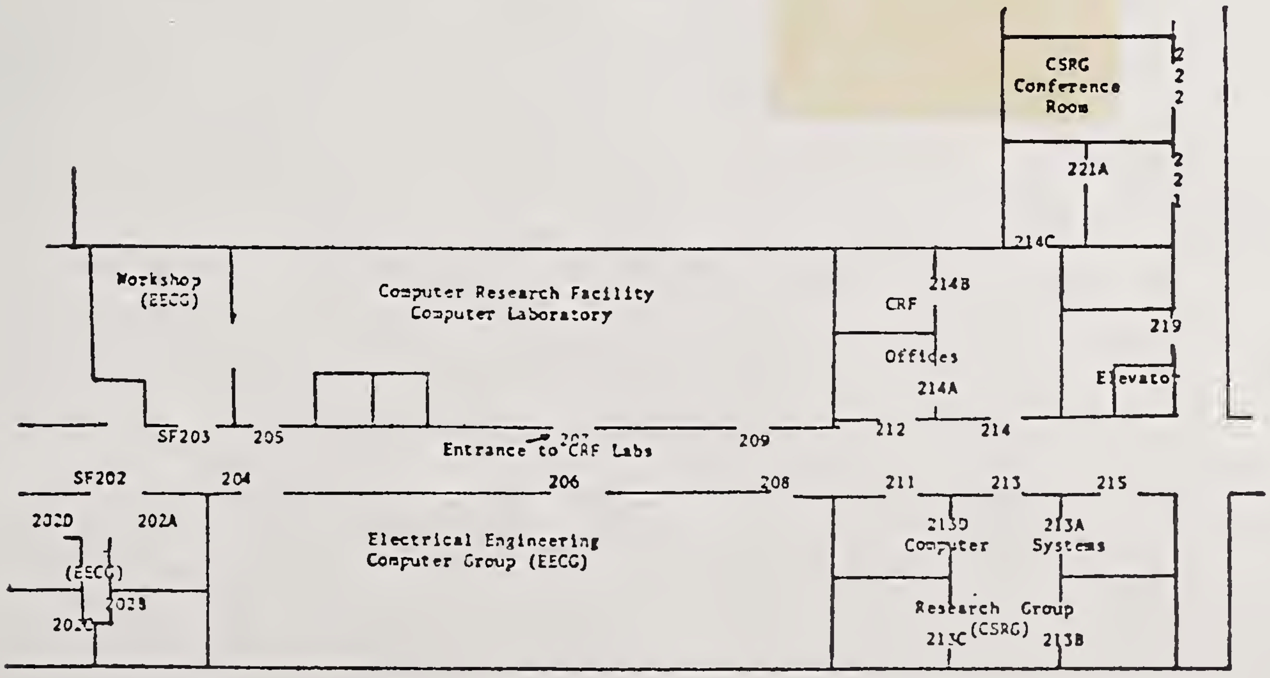


FLOOR PLAN: TWELFTH FLOOR, BURTON TOWER

University of Toronto Computer Centre



FLOOR PLAN: FIRST FLOOR, SANDFORD FLEMING LABORATORIES



FLOOR PLAN: SECOND FLOOR, SANDFORD FLEMING LABORATORIES

UNIVERSITY OF TORONTO
COMPUTER CENTRE,
TORONTO, CANADA.

CAMPUS DELIVERY

MR.G.GRANT
UTCC
SANDFORD FLEMING LABS.
ROOM 143
UNIVERSITY OF TORONTO